

R-585-12-8-38

SITE INSPECTION OF  
TRI-STATE ROTUNDA DRIVE SITE  
PREPARED UNDER

ORIGINAL  
(Red)

TDD NO. F3-8804-24  
EPA NO. PA-1873  
CONTRACT NO. 68-01-7346

FOR THE  
  
HAZARDOUS SITE CONTROL DIVISION  
U.S. ENVIRONMENTAL PROTECTION AGENCY

MARCH 15, 1989

NUS CORPORATION  
SUPERFUND DIVISION

SUBMITTED BY

REVIEWED BY

APPROVED BY

(b) (4)

PROJECT MANAGER

SECTION SUPERVISOR

REGIONAL OPERATIONS  
MANAGER, FIT 3

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## SECTION 1



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## 1.0 INTRODUCTION

### 1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-7346. This specific report was prepared in accordance with Technical Directive Document No. F3-8804-24 for the Tri-State Rotunda Drive Site located in Summit Township, Erie County, Pennsylvania.

### 1.2 Scope of Work

NUS FIT 3 was tasked to conduct a site inspection of the subject site.

### 1.3 Summary

The Tri-State Rotunda Drive Site is a 1.3-acre, inactive drum disposal area located in Summit Township, Erie County, Pennsylvania. The site was utilized by the previous owner, Marlin Coon, for the storage and disposal of drums of waste produced during the manufacture of urethane foam insulating material by Mr. Coon's company, Tri-State Insulation. The drums were disposed at this site for an unknown period of time, ending in 1984. Tri-State Insulation declared bankruptcy in 1986.

In 1984, Pennsylvania Department of Environmental Resources (PA DER) personnel discovered at least 31 drums of waste disposed on site. In October 1986, EPA conducted a cleanup at this site, which consisted of the removal of all drums known to exist on the property. The EPA on-scene coordinator, David Wright, noted that the drums appeared to be in good condition; however, he stated that leakage may have occurred. Hazardous waste determinations conducted of the materials determined that the drum contents consisted of ignitable solids and liquids and a waste cyanide mixture. Subsequent activities on site by the current lessee of the property, Southside Trailer Service, have revealed additional buried drums, which are being stored for future removal.

Approximately 50 homes within 1/4 mile of the site rely on domestic wells for their potable water supply. Wells in the area draw from either the glacial sediments or the Conneaut Group and are generally less than 100 feet deep.

Site Name: Tri-State Rotunda Drive Site

TDD No.: F3-8804-24

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The environmental concerns at the site are groundwater and surface water contamination due to leakage of drummed waste materials.

NUS FIT 3 conducted a site inspection at the subject site on May 11, 1988. Samples collected in and around the Tri-State Rotunda Drive Site revealed elevated levels of cadmium and mercury. A detailed Quality Assurance Review and Toxicological Evaluation of the sample results from this inspection can be found in sections 7.0 and 8.0, respectively.

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## SECTION 2

## 2.0 THE SITE

### 2.1 Location

The Tri-State Rotunda Drive Site is located at the end of Rotunda Drive in Summit Township, Erie County, Pennsylvania (see figure 2.1, page 2-2). According to the United States Geological Survey (U.S.G.S.) Erie South, Pennsylvania 7.5 minute quadrangle, the approximate center of the site is at 42° 03' 30.5" latitude and 80° 05' 30" longitude. Measuring from the northwestern corner of the Erie South map, the site is located 4-1/2 inches east and 12 inches south.<sup>1</sup>

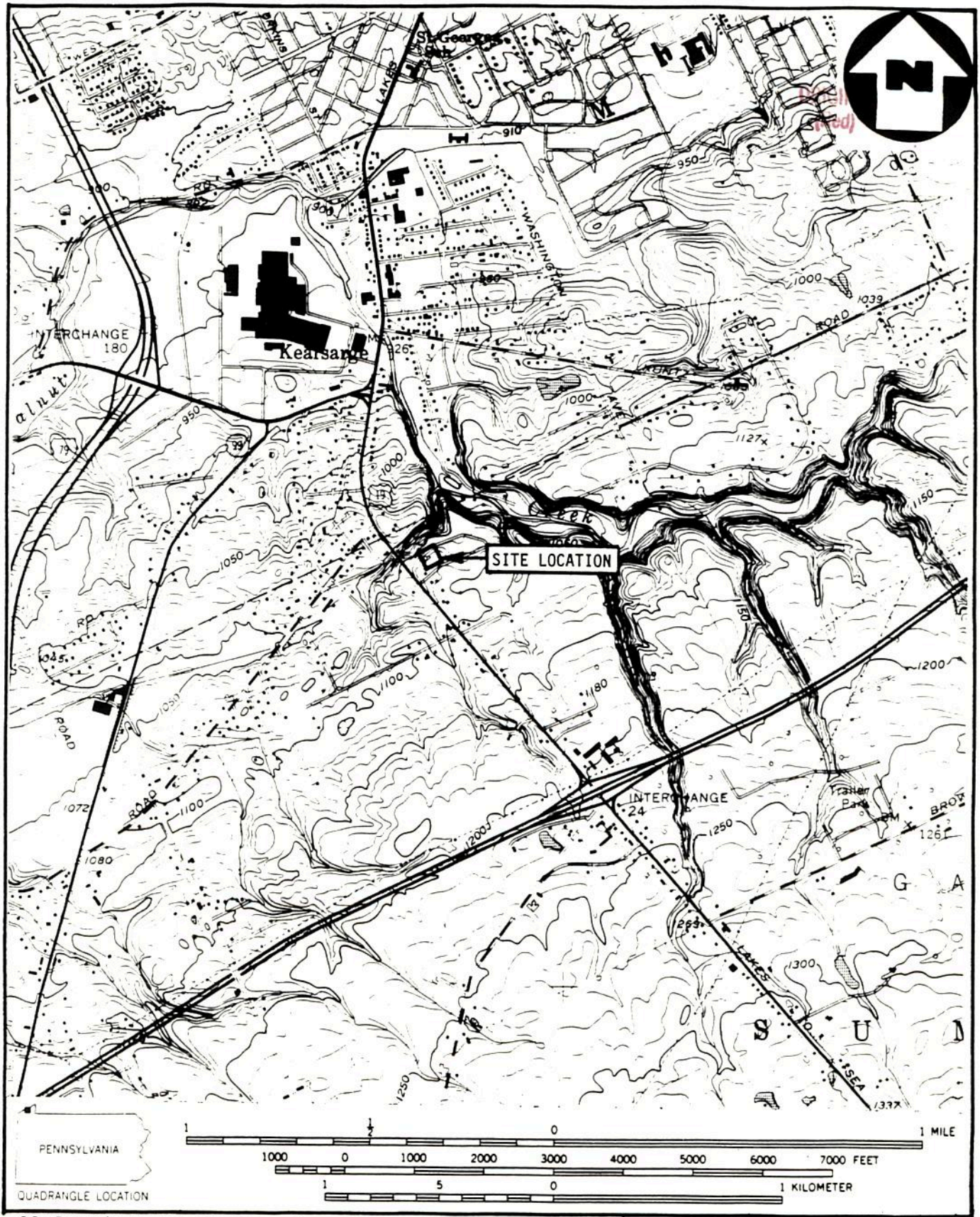
### 2.2 Site Layout

The 1.3-acre site is located at the end of Rotunda Drive, off Route 19 in Summit Township, Erie County (see figure 2.2, page 2-3). Southside Trailer Service currently occupies and utilizes the building on site for its tractor trailer repair and maintenance shop. A shed, which holds fiber cans containing an unknown white material, is located to the northeast of the main building. The area to the north and northeast of the main building is wooded. This area is the location of the waste drum disposal site. A steep slope, leading into a tributary to Walnut Creek, is located to the north of the main building. Drainage from the site flows off this slope into Walnut Creek. A grassy area, which may have been utilized as a disposal area by another party, is found to the south and southeast of the site (see Rotunda Drive, TDD No. F3-8804-23, PA-2029).<sup>2</sup>

### 2.3 Ownership History

Robert Corritore is the current owner of the site property. He leases the site to Southside Trailer Service, which operates a tractor trailer maintenance and repair shop on the property. Mr. Corritore purchased the property in 1986 from Marlin Coon. He began leasing the property to Southside Trailer Service six months after his purchase. Mr. Coon purchased the property from an unknown party in the 1970s.<sup>3</sup>





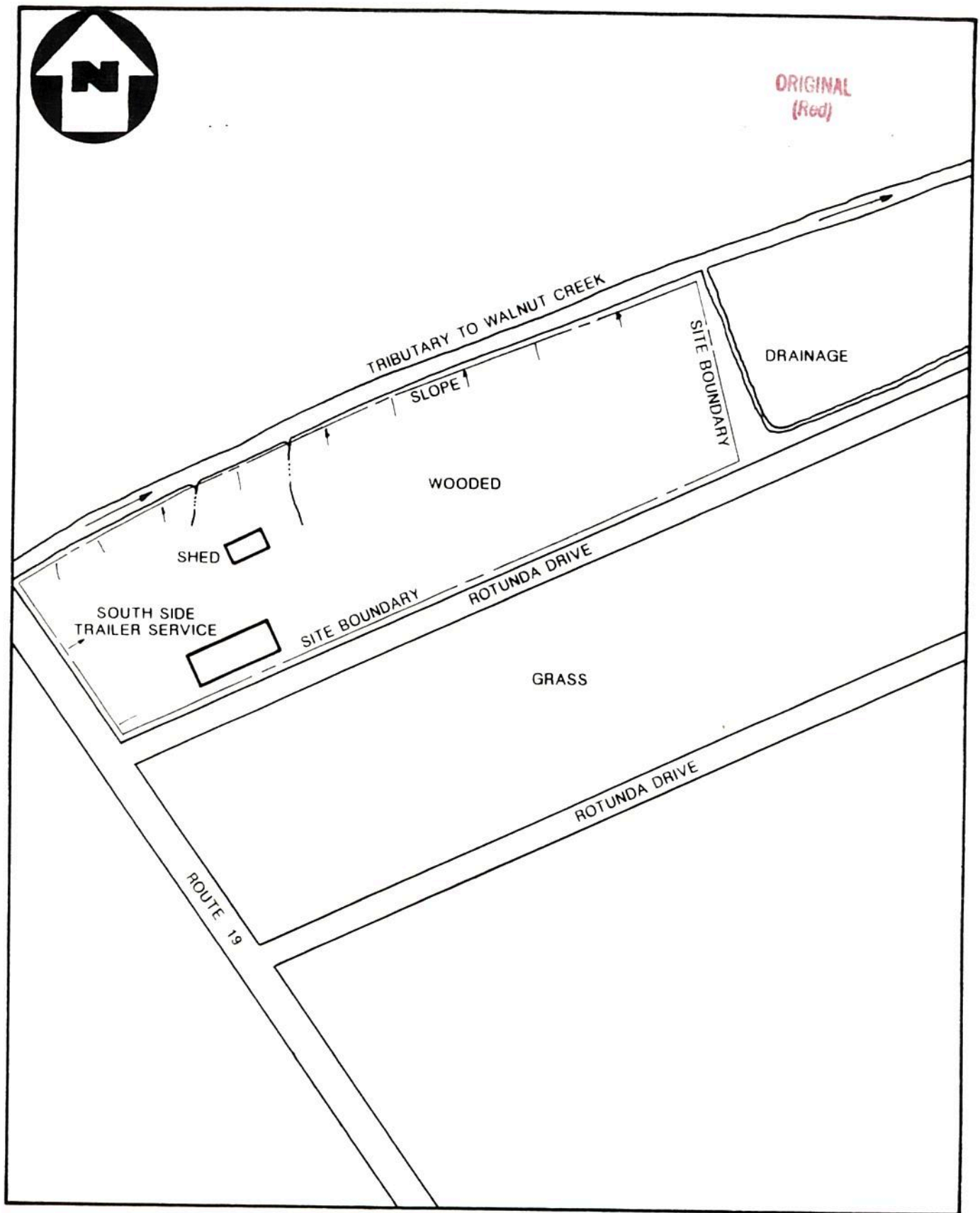
SOURCE: (7.5 MINUTE SERIES) U.S.G.S. ERIE SOUTH, PA QUAD.

**SITE LOCATION MAP**  
**TRI-STATE ROTUNDA DRIVE, SUMMIT TWP., PA**  
**SCALE 1: 24000**

FIGURE 2.1







SITE SKETCH

FIGURE 2.2

TRI-STATE ROTUNDA DRIVE, SUMMIT TWP., PA  
( NO SCALE )



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#### 2.4 Site Use History

The site is currently occupied by Southside Trailer Service, which utilizes the property for a tractor trailer maintenance and repair shop. Southside Trailer leases the property from Mr. Corritore, the current owner, who did not use the property before leasing it to Southside Trailer. Prior to its use as a tractor trailer maintenance shop, the site was utilized by Tri-State Insulation to operate a urethane foam insulation manufacturing business owned by Marlin Coon. During the insulation manufacturing, wastes produced were stored in drums in the basement of the building and in the wooded area behind the building.<sup>3,4</sup>

#### 2.5 Permit and Regulatory Action History

Tri-State Insulation held no permits. PA DER discovered 31 drums of waste on the property in 1984, while Tri-State still occupied the property. These wastes were removed by EPA in October 1986. Sampling by EPA of the contents of the drums revealed ignitable solids and liquids and a waste cyanide mixture.<sup>4</sup>

#### 2.6 Remedial Action to Date

In October 1986, EPA conducted a cleanup at the property, which consisted of the removal of all on-site drums and contaminated soils. This action was in response to a 1984 PA DER inspection that revealed 31 drums on the site.<sup>4</sup>

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### SECTION 3



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### 3.0 ENVIRONMENTAL SETTING

#### 3.1 Water Supply

Potable water within a three-mile radius of the site is obtained from both surface water and groundwater sources. Two municipal water companies and private domestic wells supply water to the area.<sup>5</sup>

The City of Erie Bureau of Water, which services the northern part of the study area, obtains its water from two intakes on Lake Erie, (b) (9) northwest of the site. The system uses an average of 40 million gallons per day (mgd) to service 51,000 connections (approximately 190,000 people), many of which are outside the 3-mile radius of the site.<sup>6</sup>

The Millcreek Township Water Authority (MTWA) services a small portion of the study area northwest of the site. The MTWA purchases an average of 1.5 mgd of water from the city of Erie to supply about 8,000 people and industries. In addition to purchased water, the water authority utilizes two wells, located (b) (9) northwest of the site, for an additional 0.25 mgd of water. The wells are 22 feet deep and draw from the glacial and lacustrine sediments. Water from these wells serves approximately 4,000 people and industries. The MTWA supplies drinking water to a total of 12,000 to 12,250 people, most of whom live outside of the study area.<sup>5</sup>

The remainder of the population within a 3-mile radius of the site, approximately 5,027 people, receives potable water from private domestic wells. This figure is based on a count of homes located outside the municipal supply service areas taken from U.S.G.S. topographic maps. This includes most of the southern two-thirds of the site. The nearest known drinking water well is located about 200 to 300 feet south of the site; the depth is unknown. Approximately 50 homes within 0.25 mile of the site are served by private wells.<sup>2</sup> Wells in the area draw from either the glacial sediments or the Conneaut Group and are generally less than 100 feet deep.<sup>7</sup>

#### 3.2 Surface Waters

Site surface drainage is to the north into an unnamed tributary to Walnut Creek. This tributary flows to the northeast for approximately 1,000 feet before discharging into Walnut Creek. Walnut Creek flows in a westward direction for approximately 15 miles before its final discharge into Lake Erie. There are no surface water intakes within three miles of the site. There are no wetlands in the study area.<sup>1</sup>

### 3.3 Hydrogeology

The geologic and hydrogeologic conditions in the study area were researched as part of the site inspection. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

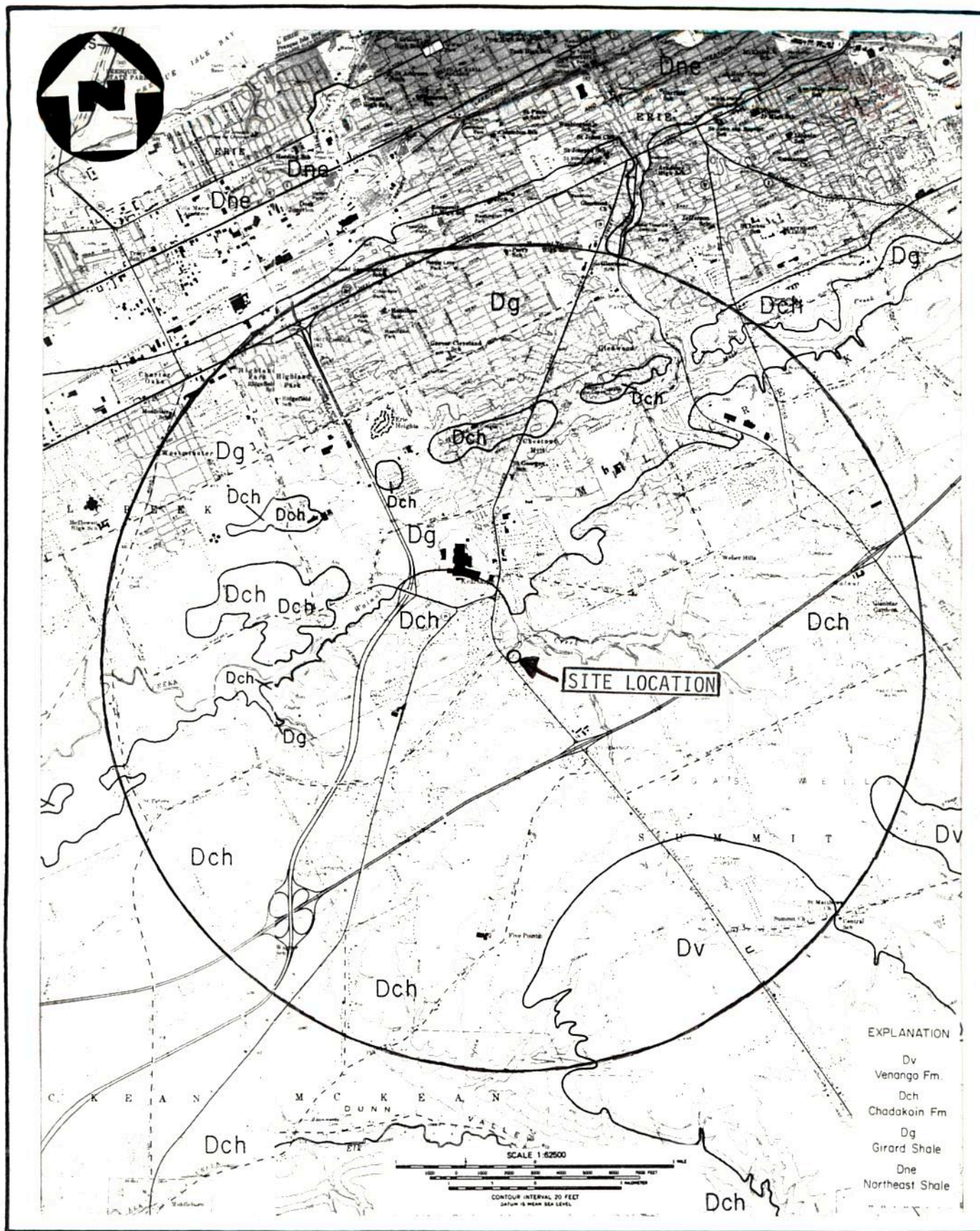
#### 3.3.1 Geology

The Tri-State Rotunda Drive Site is located on the northern edge of the Glaciated Section of the Appalachian Plateaus Physiographic Province. The northwestern third of the study area lies in the Eastern Lake Section of the Central Lowland Physiographic Province. The generally flat-lying bedrock of these sections dips regionally to the south-southwest at 10 to 12 feet per mile, and the sections are blanketed by lacustrine and beach sediments in the Eastern Lake Section and by thick glacial drift in the Glaciated Section. The topography of the glacial section is that of smooth, rolling uplands dissected by broad, deep valleys with rather steep walls and commonly flat floors. The land surface of the lake plain is extremely flat, except for abrupt rises up onto former beaches created by higher levels of the lake. These two provinces are separated by the Appalachian Escarpment, the northwestern edge of the Appalachian Plateaus Physiographic Province. The drainage pattern is subdendritic to parallel along Lake Erie.<sup>8,9</sup>

The site is underlain by unconsolidated Pleistocene age glacial sediments primarily in the form of outwash. The outwash consists of well-sorted deposits of sand and gravel interbedded with silt and clay layers and is found chiefly in stream valleys. Till blankets the uplands and consists of a random mixture of rock material ranging in grain size from clay to boulders. The glacial sediments in the study area were deposited during a succession of glacial advances and are named for these advances. The deposits in the site vicinity are classified as Ashtabula Till. Older deposits present in the study area have been identified as Hiram and Lavery Till. The thickness of the glacial deposits is highly variable but is expected to be about 40 to 100 feet thick along the escarpment and less than 40 feet in the uplands south of the site.<sup>8,9</sup>

The bedrock underlying the glacial outwash at the site is the Devonian age Chadakoin Formation, the upper member of the Conneaut Group (see figure 3.1, page 3-3).<sup>10</sup> The Chadakoin Formation consists of light gray to brown siltstone and fine-grained sandstone interbedded with medium gray shale. The expected stratigraphic thickness ranges between 300 and 325 feet.<sup>8,11</sup>





Source: Atlas of Preliminary Geologic Quadrangle Maps of PA

GEOLOGIC MAP  
TRI-STATE ROTUNDA DRIVE  
ERIE, PENNSYLVANIA

FIGURE 3.1





The lower member of the Conneaut Group, the Girard Shale, underlies the Chadakoin Formation and subcrops about 0.3 mile north of the site. The Girard Shale is composed of light to medium gray, very fine-grained shale with minor sandy layers. The formation has a maximum stratigraphic thickness of 225 feet.<sup>8,11</sup>

The Devonian age Northeast Shale underlies the Girard Shale but does not subcrop within the study area. The formation consists of 300 to 400 feet (stratigraphic) of interbedded medium gray and greenish-gray shale, siltstone, and fine-grained sandstone.<sup>11</sup>

Overlying the Chadakoin Formation and cropping out approximately 1.5 miles south of the site is the Devonian age Venango Formation. The Venango Formation consists of light gray siltstone interbedded with some bluish-gray shale and flaggy gray sandstone. Two 20- to 45-foot sandstones, the LeBoeuf Sandstone and the Woodstock Sandstone, are, respectively, the lower and upper key beds defining the formation. Only the lower 100 feet of the Venango Formation are present in the study area.<sup>8,11</sup>

The northern third of the study area is blanketed by unconsolidated Pleistocene age lacustrine sediments, which were deposited when Lake Erie was at a higher level. The lacustrine deposits consist predominantly of sorted silt and sand with some flat cobbles and pebbles. All of the lacustrine sediments were apparently derived from glacial till and reworked beach-ridge material and were deposited in quiet-water environments.<sup>12</sup>

### 3.3.2 Soils

Two soils are mapped at the site: the Allis silt loam, 3 to 8 percent slopes (AaB), and the Langford silt loam, 8 to 15 percent slopes, moderately eroded (LaC2) (see figure 3.2, page 3-5).<sup>13</sup> Landfill activities at the site have caused the disturbance and burial of much of the native soil.

The Allis soils, which account for about 20 percent of the site soils, are shallow, poorly drained, and silty. The parent material was glacial till that contained gray acid shale and some sandstone. Movement of air and water downward through the profile is retarded by a slowly permeable layer of silt and clay, which lies just above the bedrock. The soil is a dark brown silt loam to a depth of 10 inches and a grayish-brown silty clay to clay loam to a depth of 18 to 30 inches. Soil pH ranges from 5.8 to 6.0. Internal drainage is poor, and surface drainage is moderate.<sup>13</sup>





Source: Soil Survey of Erie County, PA

SOIL MAP  
TRI-STATE ROTUNDA DRIVE  
ERIE, PENNSYLVANIA

FIGURE 3.2





The Langford Series, which accounts for 80 percent of the site soils, is made up of deep, moderately well-drained soils that formed in glacial till derived from acid shale bedrock mixed with sediments of granite, sandstone, and limestone of glacial origin. The soil has a slowly permeable fragipan at depths of 26 to 36 inches. With depth, the soil grades from a yellowish-brown silt loam to a grayish-brown sandy loam to an olive-brown silty clay loam. Soil pH ranges from 5.0 to 5.8 to a depth of 44 inches.<sup>13</sup>

### 3.3.3 Groundwater

Groundwater in the unconsolidated glacial and lacustrine deposits is stored and transmitted through intergranular pore space. The permeability of these sediments generally depends on grain size and sorting. The glacial sediments are the uppermost aquifer at the site. The glacial tills are generally poorly permeable, due to the abundance of silt and clay, and are capable of yielding only small supplies of water derived from the more sorted sand and gravel lenses interbedded in the till. Potentially large quantities of water are found in the buried valleys, which contain a fill of coarse outwash.<sup>8,9</sup> Yields in excess of 300 gallons per minute (gpm) can sometimes be obtained from the outwash deposits; however, yields of less than 30 gpm are the general case.<sup>9,12</sup> Wells in the glacial sediments in the study area have depths primarily between 25 and 90 feet and are often cased the entire length of the hole (see appendix D). The depth to water in these wells ranges mostly between 5 and 50 feet.<sup>7</sup>

In the bedrock, groundwater may occur in both primary and secondary porosity; however, the fine texture of the bedrock units in the study area prohibits significant intergranular water movement. The Chadakoin Formation is capable of supplying small to moderate amounts of groundwater. The Girard Shale is capable of yielding small and occasionally moderate amounts of groundwater to wells.<sup>9</sup> The majority of the wells completed in the bedrock in the study area are less than 100 feet in depth. Wells greater than 100 feet usually encounter salt water. Well yields range primarily between 0.5 and 50 gpm. The depth to groundwater in the bedrock is usually less than 60 feet.<sup>8</sup>

The unconsolidated and bedrock aquifers are under unconfined water-table conditions, with most of the groundwater flow occurring above the bedrock. The bedrock units are hydraulically interconnected through fracturing. The glacial sediments are hydraulically connected to the underlying bedrock through direct contact with fractures, and the sediments are a source of recharge to the bedrock. No extensive confining layers have been documented in the three-mile radius of the site. The direction of shallow groundwater flow at the site is expected to be to the north, toward Walnut Creek, based on topography and drainage patterns.<sup>8,9</sup>

Three home wells were surveyed during the site visit; however, well depths were available for only one well. The Southside Trailer Service well, located on the southwestern corner of the site, is a dug well with a depth of 10 feet. The well produces from the glacial sediment. Domestic wells in the study area draw from either the glacial sediments or the Conneaut Group.<sup>8</sup>

### 3.4 Climate and Meteorology

The study area can be characterized as a humid, temperate climate. The average temperature in the study area is 47.5°F. Annual precipitation is approximately 40 inches. Average annual lake evaporation is 28 inches. Net precipitation per year is 12 inches. The 1-year, 24-hour rainfall is 2.3 inches.<sup>14</sup>

### 3.5 Land Use

The land surrounding the site is predominantly residential. Immediately surrounding the site to the north is a wooded area and a tributary to Walnut Creek, to the south is residential land, to the east is a wooded area, and to the west is Route 19.<sup>1,2</sup>

### 3.6 Population Distribution

According to the U.S.G.S. topographic map interpretation and based on a count of homes in the area multiplied by 3.8 persons, there are approximately 2,269 people residing within a 1-mile radius, 18,068 people residing within a 2-mile radius, and 62,780 people residing within a 3-mile radius.<sup>1</sup>

### 3.7 Critical Environments

According to the United States Department of the Interior, Fish and Wildlife Service, there are no critical environments or endangered species known to exist in the study area.<sup>15</sup>

## SECTION 4



#### 4.0 WASTE TYPES AND QUANTITIES

The previous owner of the property, Marlin Coon, disposed approximately 40 drums north of the main production building for an unknown period of time, ending in 1984. The drums consisted of waste produced during the manufacture of insulating material. Wastes may have included hardened urethane foam, isocyanate, off-specification resin, mineral spirits, silicone, paint waste, and waste asphalt coating mixed with solvent (hazardous waste determinations were conducted of the materials). It was found that the drum contents consisted of ignitable solids and liquids and a waste cyanide mixture.<sup>4</sup>

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## SECTION 5

## 5.0 FIELD TRIP REPORT

### 5.1 Summary

On Wednesday, May 11, 1988, NUS FIT 3 personnel Donna Davies, Randy Patarcity, Alicia Shultz, William Plumpton, Brian Lipsitz, Steven Hoke, Mary Gardner, and Scott Britt conducted a site inspection of the subject site. FIT 3 was accompanied by Bernice Pasquini, of EPA. The weather at the time of the site visit was sunny, with temperatures in the mid-50s.

The total number of samples collected by the FIT was 10 solid and 7 aqueous samples, including blanks and duplicates (see figure 5.1, page 5-4). Photographs were taken on site (see figure 5.3, page 5-7, and the photograph log, section 5.5).

### 5.2 Persons Contacted

#### 5.2.1 Prior to Field Trip

(b) (6)  
Erie, PA 16508  
(b) (6)

Bernice Pasquini  
U.S. EPA  
841 Chestnut Building  
Ninth and Chestnut Streets  
Philadelphia, PA 19107  
(215) 597-1110

Mark Gorman  
PA DER  
1012 Water Street  
Meadville, PA 16335  
(814) 724-8526

#### 5.2.2 At the Site

Bernice Pasquini  
U.S. EPA  
841 Chestnut Building  
Ninth and Chestnut Streets  
Philadelphia, PA 19107  
(215) 597-1110

### 5.2.3 Water Supply Well Information

The following off-site wells were sampled during site inspection. For the location of these wells, see figure 5.2 (page 5-5). Completed well questionnaires are located in appendix C.

(b) (6)

Erie, PA 16508

(b) (6)

Nonpotable uses  
HW-1 and HW-1A

(b) (6)

Erie, PA 16509

(b) (6)

Potable water  
HW-3

(b) (6)

Erie, PA 16509

(b) (6)

Potable water  
HW-4

5.3

## SAMPLE LOG

TDD NUMBER F3-8864-24SITE NAME Tri-State Rotunda DriveEPA NUMBER PA-1873

TRAFFIC REPORTS		SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
Organic	Inorganic							
CP735	—	Blank	Solid	Solid Blank	Solid Blank	—	—	—
CP746	MCP903	54	Solid	Gray-brown silty clay	Duplicate surface soil sample of 53	Dermal exposure to workers	—	—
CP747	MCP905	55	Solid	Dried light gray powder	Surface soil sample taken in shed	"	—	—
CP745	MCP902	Blank	Aqueous	Aqueous Blank	Aqueous Blank	—	—	—
CP739	MCP896	HW1	Aqueous	—	(b) (6) Erie, PA 16508	Potential drinking water supply - not currently used	6.58	Conductivity - 525 $\mu$ o
CP740	MCP897	HW1A	Aqueous	—	Duplicate sample of HW1	Duplicate of HW1	6.58	Conductivity - 525 $\mu$ o
CP741	MCP898	HW3	Aqueous	—	(b) (6) Erie, PA 16509	Potable drinking water supply	7.3	Conductivity - 742 $\mu$ o
CP742	MCP899	HW4	Aqueous	—	(b) (6) Erie, PA 16509	Potable drinking water supply	7	Conductivity - 324 $\mu$ o
*CP741	MCP073	Background	Solid	Dark brown soil	North side of ravine SE of site	—	—	—

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\* This sample was shipped under Rotunda Drive Landfill, case # 9561



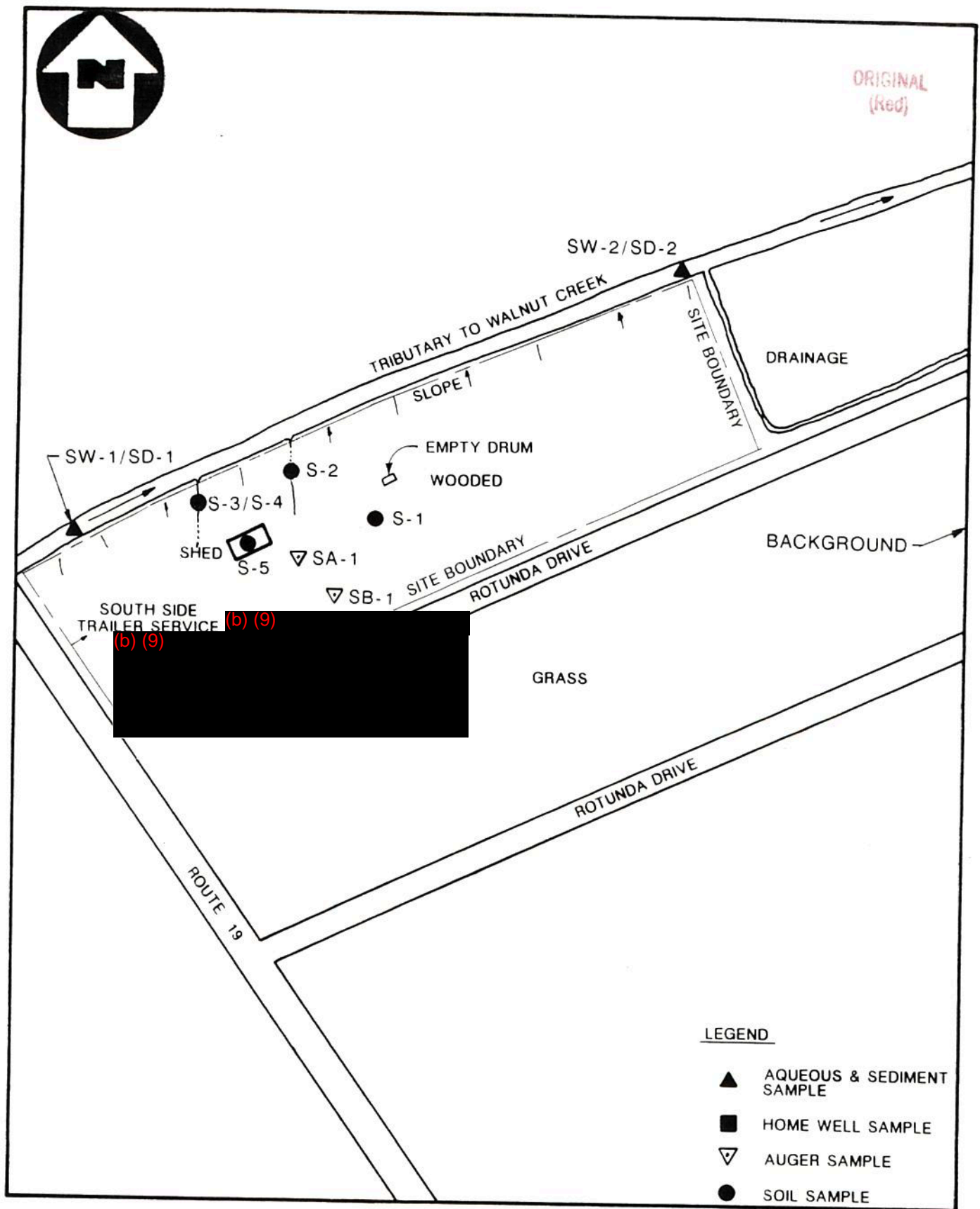
5.3

## SAMPLE LOG

TDD NUMBER F3-8804-24EPA NUMBER PA-1873SITE NAME In State Rotunda Drive

TRAFFIC REPORTS		SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	PH	FIELD MEASUREMENT
Organic	Inorganic							
CP728	MCP887	S1	Solid	Brown silty clay	Surface soil sample taken NE of building in wooded area	Dermal exposure to workers	—	—
CP729	MCP888	S2	Solid	Wet, brown silty, sediments	Surface soil sample taken in drainage pathway NE of building		—	—
CP730	MCP889	S3	Solid	Gray-brown silty clay	Surface soil sample obtained in drainage pathway N of building		—	—
CP731	MCP890	SA1	Solid	Medium to dark brown clay	Auger sample taken at 15" NE of building		—	—
CP732	MCP891	SB1	Solid	Dark brown sand and clay	Auger sample taken at 8" E of building		—	—
CP737	MCP892	SW1	Aqueous	Upstream sample of tributary to Walnut Creek	Upstream surface water sample of tributary to Walnut Creek	Tributary to Walnut Creek utilized for swimming	7.68	Conductivity - 50 $\mu$ S/cm
CP733	MCP893	SD1	Solid	Granulated shales and slates, medium brown	Sediment sample taken upstream in trib. to Walnut Creek	—	—	—
CP738	MCP894	SW2	Aqueous	Downstream sample of tributary to Walnut Creek	Downstream surface water sample taken of tributary to Walnut Creek	Tributary to Walnut Creek - Walnut Creek utilized for swimming	8.0	Conductivity - 495 $\mu$ S/cm
CP734	MCP895	SD2	Solid	Brown silts and shales	Sediment sample taken downstream in tributary to Walnut Creek	—	—	—

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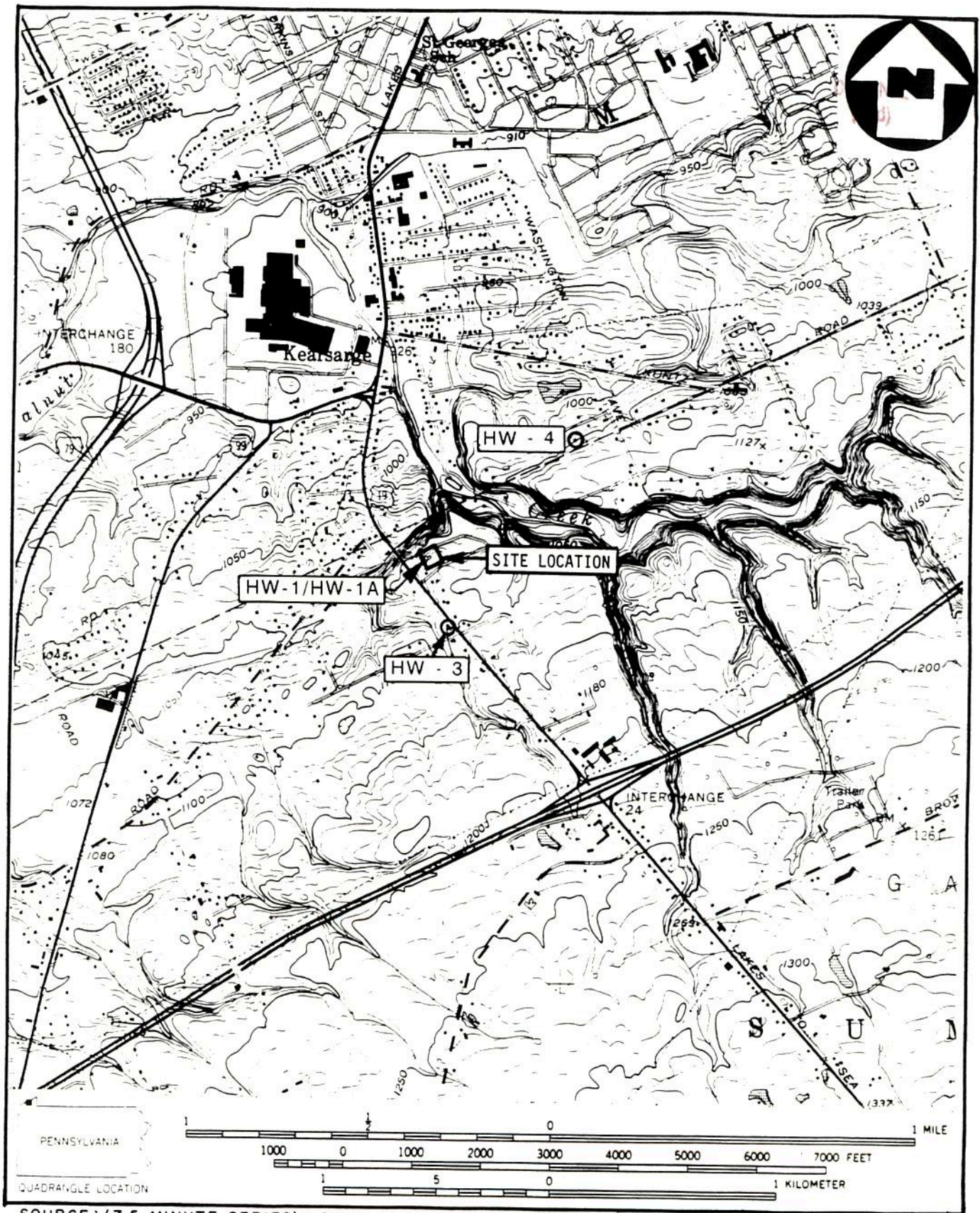


SAMPLE LOCATION MAP  
TRI-STATE ROTUNDA DRIVE, SUMMIT TWP., PA  
 ( NO SCALE )

FIGURE 5.1







SOURCE: (7.5 MINUTE SERIES) U.S.G.S. ERIE SOUTH, PA QUAD.

HOME WELL SAMPLE LOCATIONS  
 TRI-STATE ROTUNDA DRIVE, SUMMIT TWP., PA  
 SCALE 1: 24000





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#### 5.4 Site Observations

- The background HNU reading was 0 ppm; no readings above background were recorded.
- The mini-alert was set at X1; no readings above background were recorded.
- The site was unfenced.
- The site was approximately four acres in size.
- The site was predominantly wooded.
- Some remnants of rusted drums were evident on site.
- Site surface drainage was northwest into a tributary to Walnut Creek.
- The northern border of the site was characterized by a very steep slope leading into the tributary to Walnut Creek.
- The building leased by Southside Trailer Service is located in the southwestern portion of the property.
- A shed, which may have been used for drum storage by the previous owner, was located directly behind and to the north of the Southside Trailer Service building. Several small fiber drums containing an unknown white powder were observed in the shed.
- A tributary to Walnut Creek was found approximately 250 feet to the north of the site.
- A background soil sample will be shared with an adjacent site. Rotunda Drive (EPA No. PA-2029) was sampled on the same day as Tri-State Rotunda Drive.

**EPA**

**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS  
AND INCIDENTS**

**I. IDENTIFICATION**

01 STATE PA	02 SITE NUMBER OR 1873
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**II. HAZARDOUS CONDITIONS AND INCIDENTS**

01 ☒ A. GROUNDWATER CONTAMINATION      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☒ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 185/3 mile      04 NARRATIVE DESCRIPTION  
There is the potential for heavy metal contaminants in soils to migrate into the groundwater.

01 ☒ B. SURFACE WATER CONTAMINATION      02 ☒ OBSERVED (DATE: 5/10/88)      ☐ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: unknown      04 NARRATIVE DESCRIPTION  
Sediment samples from the tributary to Walnut Creek revealed notable levels of cadmium and PAHs downstream.

01 ☐ C. CONTAMINATION OF AIR      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☐ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_      04 NARRATIVE DESCRIPTION  
None known or observed.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☐ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_      04 NARRATIVE DESCRIPTION  
None known or observed.

01 ☒ E. DIRECT CONTACT      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☒ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: unknown      04 NARRATIVE DESCRIPTION  
The highest concentration of the majority of metals identified on site was measured in a sample obtained from the floor of the storage shed. Access to this area is unrestricted.

01 ☒ F. CONTAMINATION OF SOIL      02 ☒ OBSERVED (DATE: 5/10/88)      ☐ POTENTIAL    ☐ ALLEGED  
03 AREA POTENTIALLY AFFECTED: 1.3      04 NARRATIVE DESCRIPTION  
(Acres)  
Elevated levels of cadmium, mercury, and lead were detected in on-site soil samples.

01 ☒ G. DRINKING WATER CONTAMINATION      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☒ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: 5,027      04 NARRATIVE DESCRIPTION  
There is the potential for metal contamination on site to migrate into groundwater. There is a domestic well on-site. There is also a domestic well approximately 200 to 300 feet south of the site.

01 ☐ H. WORKER EXPOSURE/INJURY      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☐ POTENTIAL    ☐ ALLEGED  
03 WORKERS POTENTIALLY AFFECTED: \_\_\_\_\_      04 NARRATIVE DESCRIPTION  
None known or observed.

01 ☐ I. POPULATION EXPOSURE/INJURY      02 ☐ OBSERVED (DATE: \_\_\_\_\_)      ☐ POTENTIAL    ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_      04 NARRATIVE DESCRIPTION  
None known or observed.



**EPA**

**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS  
AND INCIDENTS**

**I. IDENTIFICATION**

<b>01 STATE</b> PA	<b>02 SITE NUMBER</b> 1873
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ORIGINAL  
(Red)**II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)**01 ☐ J. DAMAGE TO FLORA02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None known or observed.

01 ☐ K. DAMAGE TO FAUNA02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None known or observed.

01 ☐ L. CONTAMINATION OF FOOD CHAIN02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None known or observed.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES  
(Spills, Runoff, Standing liquids, Leaking drums)02 ☒ OBSERVED (DATE: 5/10/88)☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 62,780

04 NARRATIVE DESCRIPTION

In 1984, PA DER personnel observed at least 31 drums. Some were observed to be in poor condition, with the potential for leakage.

01 ☒ N. DAMAGE TO OFF-SITE PROPERTY02 ☐ OBSERVED (DATE: \_\_\_\_\_)☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

There is the potential for migration of on-site contaminants off site.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None known or observed.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING02 ☐ OBSERVED (DATE: \_\_\_\_\_)☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None known or observed.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

**III. TOTAL POPULATION POTENTIALLY AFFECTED:** 62,780**IV. COMMENTS****V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.

PA DER Preliminary assessment. September 21, 1987.

**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 8 - OPERATOR INFORMATION****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873**II. CURRENT OPERATOR** (Provide if different from owner)**OPERATOR'S PARENT COMPANY** (if applicable)

01 NAME N/A		02 D + B NUMBER		10 NAME N/A		11 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					

**III. PREVIOUS OPERATOR(S)** (List most recent first; provide only if different from owner)**PREVIOUS OPERATORS' PARENT COMPANIES** (if applicable)

01 NAME N/A		02 D + B NUMBER		10 NAME N/A		11 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME N/A		02 D + B NUMBER		10 NAME N/A		11 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME N/A		02 D + B NUMBER		10 NAME N/A		11 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

**IV. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.  
PA DER. Preliminary assessment. September 21, 1987.





EPA

POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

## I. IDENTIFICATION

01 STATE  
PA02 SITE NUMBER  
1873

## II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)  
Tri-State Rotunda Drive02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER  
End of Rotunda Drive03 CITY  
Summit Township04 STATE  
PA05 ZIP CODE  
1650906 COUNTY  
Erie07 COUNTY CODE  
04908 CONG. DIST  
2109 COORDINATES  
LATITUDE  
43° 03' 32"LONGITUDE  
80° 05' 25"

10 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE☐ B. FEDERAL☐ C. STATE☐ D. COUNTY☐ E. MUNICIPAL☐ G. UNKNOWN

## III. INSPECTION INFORMATION

01 DATE OF INSPECTION  
May 11, 198802 SITE STATUS  
☐ ACTIVE  
☒ INACTIVE

03 YEARS OF OPERATION

unknown

1984

BEGINNING YEAR

ENDING YEAR

UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA☒ B. EPA CONTRACTOR

NUS FIT 3

☐ C. MUNICIPAL☐ D. MUNICIPAL CONTRACTOR

(Name of firm)

☐ E. STATE☐ F. STATE CONTRACTOR

(Name of firm)

☐ G. OTHER

(Specify)

(b) (4)

06 TITLE

Environmental Scientist

07 ORGANIZATION

NUS Corporation

(b) (4)

10 TITLE

Agricultural Engineer

11 ORGANIZATION

NUS Corporation

Biologist

NUS Corporation

Environmental Scientists

NUS Corporation

Geologist

NUS Corporation

Geologist

NUS Corporation

B. Pasquini

SIO

EPA

(215) 597-1110

13 SITE REPRESENTATIVES INTERVIEWED

(b) (6)

14 TITLE

Property Owner

15 ADDRESS

(b) (6)

Erie, PA

16 TELEPHONE NO.

(b) (6)

(b) (6)

17 ACCESS GAINED BY  
(Check one)  
☒ PERMISSION  
☐ WARRANT18 TIME OF INSPECTION  
8:00am

19 WEATHER CONDITIONS

Sunny, with temperatures in the mid-50's.

## IV. INFORMATION AVAILABLE FROM

01 CONTACT

Marie Malave

02 OF (Agency/Organization)

U.S. EPA

03 TELEPHONE NO.

(215) 597-1110

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM

(b) (4)

05 AGENCY

NUS Corp.

06 ORGANIZATION

FIT 3

07 TELEPHONE NO.

(215) 687-9510

08 DATE

12/14/88

## II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

**01 PHYSICAL STATES** (Check all that apply)

- [illegible]

## 02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS	
CUBIC YARDS	
NO. OF DRUMS	31

## 03 WASTE CHARACTERISTICS (Check all that apply)

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> A. TOXIC | <input checked="" type="checkbox"/> E. SOLUBLE   | <input type="checkbox"/> I. HIGHLY VOLATILE |
| <input type="checkbox"/> B. CORROSIVE        | <input type="checkbox"/> F. INFECTIOUS           | <input type="checkbox"/> J. EXPLOSIVE       |
| <input type="checkbox"/> C. RADIOACTIVE      | <input checked="" type="checkbox"/> G. FLAMMABLE | <input type="checkbox"/> K. REACTIVE        |
| <input type="checkbox"/> D. PERSISTENT       | <input type="checkbox"/> H. IGNITABLE            | <input type="checkbox"/> L. INCOMPATIBLE    |
|  |  | <input type="checkbox"/> M. NOT APPLICABLE  |

### III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			Drums of solvents and unknown materials were stored on site.
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	unknown	mg/kg	Surface and auger samples on site revealed notable levels.
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

#### IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

## IV. FEEDSTOCKS (See Appendix for CAS Numbers) N/A

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

#### VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.



**EPA**

**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION**

**I. IDENTIFICATION**01 STATE  
PA02 SITE NUMBER  
1873**II. PERMIT INFORMATION**ORIGINAL  
(Red)01 TYPE OF PERMIT ISSUED  
(Check all that apply)☐ A. NPDES☐ B. UIC☐ C. AIR☐ D. RCRA☐ E. RCRA INTERIM STATUS☐ F. SPCC PLAN☐ G. STATE (Specify)☐ H. LOCAL (Specify)☐ I. OTHER (Specify)☒ J. NONE

02 PERMIT NUMBER

03 DATE ISSUED

04 EXPIRATION DATE

05 COMMENTS

**III. SITE DESCRIPTION**

01 STORAGE/DISPOSAL (Check all that apply)

☐ A. SURFACE IMPOUNDMENT☐ B. PILES☒ C. DRUMS, ABOVE GROUND☐ D. TANK, ABOVE GROUND☐ E. TANK, BELOW GROUND☐ F. LANDFILL☐ G. LANDFARM☐ H. OPEN DUMP☐ I. OTHER \_\_\_\_\_  
(Specify)

02 AMOUNT

31

03 UNIT OF MEASURE

55 gallon

04 TREATMENT (Check all that apply)  
N/A☐ A. INCINERATION☐ B. UNDERGROUND INJECTION☐ C. CHEMICAL/PHYSICAL☐ D. BIOLOGICAL☐ E. WASTE OIL PROCESSING☐ F. SOLVENT RECOVERY☐ G. OTHER RECYCLING/RECOVERY☐ H. OTHER \_\_\_\_\_  
(Specify)

05 OTHER

☒ A. BUILDINGS ON SITE  
1

06 AREA OF SITE

1.3 (Acres)

07 COMMENTS

**IV. CONTAINMENT**

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE☐ B. MODERATE☒ C. INADEQUATE, POOR☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

PA DER personnel observed at least 31 drums of wastes. Some of the drums may have contained hardened urethane foam, isocyanate, resin, mineral spirits, silicone, paint waste, and waste asphalt.

**V. ACCESSIBILITY**01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Soils with elevated levels of metals are easily accessible.

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.

PA DER. Preliminary assessment. September 21, 1987.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 1873

ORIGINAL  
(Red)

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY  
(Check as applicable)

SURFACE WELL  
A. ☒ B. ☐  
C. ☐ D. ☒

02 STATUS

ENDANGERED AFFECTED MONITORED  
A. ☐ B. ☐ C. ☒  
D. ☐ E. ☐ F. ☒

03 DISTANCE TO SITE

A. 6.5 (mi)  
B. 200 ft south (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING  
(Other sources available)  
COMMERCIAL, INDUSTRIAL, IRRIGATION  
(No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION  
(Limited other sources available) ☐ D. NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUNDWATER 5,027

03 DISTANCE TO NEAREST DRINKING WATER WELL 200 ft south (mi)

04 DEPTH TO GROUNDWATER

5 (ft)

05 DIRECTION OF GROUNDWATER FLOW

north

06 DEPTH TO AQUIFER  
OF CONCERN

5 (ft)

07 POTENTIAL YIELD  
OF AQUIFER

30 gpm (gpd)

08 SOLE SOURCE AQUIFER

☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Wells in the glacial sediment average 25 to 90 feet deep. Water levels range from 5 to 50 feet. Yields were recorded from 30 to 300 gpm. Wells in bedrock are generally less than 100 feet deep. The depth to groundwater in bedrock is less than 60 feet. Yields average 0.5 to 50 pgpm. The nearest known drinking water well is located approximately 200-300 feet south of the site, and the depth is unknown.

10 RECHARGE AREA

☒ YES  
☐ NO

COMMENTS Infiltration of precipitation recharges the glacial aquifer in the area of the site.

11 DISCHARGE AREA

☒ YES  
☐ NO

COMMENTS Groundwater discharge is via springs in ravine walls north of the site.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION,  
DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY  
IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

Tributary to Walnut Creek

Walnut Creek

AFFECTED

☐  
☐  
☐

DISTANCE TO SITE

250 feet (mi)  
1,000 feet (mi)  
(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE

A. 2,269  
NO. OF PERSONS

TWO (2) MILES OF SITE

B. 18,068  
NO. OF PERSONS

THREE (3) MILES OF SITE

C. 62,780  
NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

500 feet (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

4,883

04 DISTANCE TO NEAREST OFF-SITE BUILDING

500 feet (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The population within the vicinity of the site is residential. The city of Erie is located 1.5 miles north of the site.





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE  
PA

02 SITE NUMBER  
1873

VI. ENVIRONMENTAL INFORMATION

ORIGINAL  
(Red)

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

- ☐ A.  $10^{-6}$  -  $10^{-8}$  cm/sec ☐ B.  $10^{-4}$  -  $10^{-6}$  cm/sec ☐ C.  $10^{-4}$  -  $10^{-3}$  cm/sec ☐ D. GREATER THAN  $10^{-3}$  cm/sec  
 $10^{-5}$  -  $10^{-7}$  cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

- ☐ A. IMPERMEABLE (Less than  $10^{-6}$  cm/sec) ☐ B. RELATIVELY IMPERMEABLE ( $10^{-7}$  -  $10^{-5}$  cm/sec) ☐ C. RELATIVELY PERMEABLE ( $10^{-2}$  -  $10^{-4}$  cm/sec) ☐ D. VERY PERMEABLE (Greater than  $10^{-2}$  cm/sec)  
 $10^{-5}$  -  $10^{-7}$  cm/sec

03 DEPTH TO BEDROCK

40 - 100 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

unknown (ft)

05 SOIL pH

5.0 - 6.0

06 NET PRECIPITATION

12 (in)

07 ONE-YEAR 24-HOUR RAINFALL

2.3 (in)

08 SLOPE  
SITE SLOPE

5-8 %

DIRECTION OF SITE SLOPE

North to Northwest

TERRAIN AVERAGE SLOPE

78 %

09 FLOOD POTENTIAL

N/A

SITE IS IN \_\_\_\_\_ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5-acre minimum)

ESTUARINE OTHER  
A. >3 (mi) B. >3 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: \_\_\_\_\_

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. 3/4 (mi)

RESIDENTIAL AREAS: NATIONAL/STATE PARKS,  
FORESTS, OR WILDLIFE RESERVES

B. 1,500 ft. (mi)

AGRICULTURAL LANDS  
PRIME AG LAND AG LAND

C. n/a (mi) D. 1/2 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located in a residential area 1-1/4 miles south of Erie. A very steep incline is adjacent to the site, leading into the tributary to Walnut Creek.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.

**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 6 - SAMPLE AND FIELD INFORMATION****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873  
*ORIGINAL***II. SAMPLES TAKEN**

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	organic solids - Lancaster Labs	present
SURFACE WATER	2	organic aqueous - RCRA Env. Inc.	
WASTE		inorganics - Chemtech	
AIR			
RUNOFF			
SPILL			
SOIL	8		
VEGETATION			
OTHER	2 sediment 2 spill		

**III. FIELD MEASUREMENTS TAKEN**

01 TYPE	02 COMMENTS

**IV. PHOTOGRAPHS AND MAPS**

01 TYPE	<input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>U.S. EPA</u> (Name of organization or individual)
03 MAPS	04 LOCATION OF MAPS	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<u>U.S. EPA</u>	

**V. OTHER FIELD DATA COLLECTED** (Provide narrative description)

The HNU background reading was 0 ppm. No radiation mini-alert readings above background were recorded.

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.



**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 7 - OWNER INFORMATION****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873**II. CURRENT OWNER(S)****PARENT COMPANY (if applicable)**ORIGINAL  
(Red)

(b) (6)

02 D + B NUMBER

08 NAME  
N/A

09 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)  
(b) (6)

04 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)

11 SIC CODE

05 CITY

Erie

06 STATE  
PA07 ZIP CODE  
16508

12 CITY

13 STATE

14 ZIP CODE

01 NAME  
N/A

02 D + B NUMBER

08 NAME  
N/A

09 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)

11 SIC CODE

05 CITY

06 STATE

07 ZIP CODE

12 CITY

13 STATE

14 ZIP CODE

01 NAME  
N/A

02 D + B NUMBER

08 NAME  
N/A

09 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)

11 SIC CODE

05 CITY

06 STATE

07 ZIP CODE

12 CITY

13 STATE

14 ZIP CODE

01 NAME  
N/A

02 D + B NUMBER

08 NAME  
N/A

09 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)

11 SIC CODE

05 CITY

06 STATE

07 ZIP CODE

12 CITY

13 STATE

14 ZIP CODE

**III. PREVIOUS OWNER(S) (list most recent first)****IV. REALTY OWNER(S) (if applicable, list most recent first)**01 NAME  
(b) (6)

02 D + B NUMBER

01 NAME  
N/A

02 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)  
(b) (6)

04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

05 CITY

Erie

06 STATE  
PA07 ZIP CODE  
16509

05 CITY

06 STATE

07 ZIP CODE

01 NAME  
N/A

02 D + B NUMBER

01 NAME  
N/A

02 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

05 CITY

06 STATE

07 ZIP CODE

05 CITY

06 STATE

07 ZIP CODE

01 NAME  
N/A

02 D + B NUMBER

01 NAME  
N/A

02 D + B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)

04 SIC CODE

05 CITY

06 STATE

07 ZIP CODE

05 CITY

06 STATE

07 ZIP CODE

**V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)**

NUS FIT 3. Site inspection. May 10, 1988.  
PA DER. Preliminary assessment. September 21, 1987.

**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 9 - GENERATOR/TRANSPORTER INFORMATION****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873ORIGINAL  
(Red)**II. ON-SITE GENERATOR**

01 NAME N/A		02 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	

**III. OFF-SITE GENERATOR(S)**

01 NAME N/A		02 D + B NUMBER		01 NAME		02 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME N/A		02 D + B NUMBER		01 NAME		02 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

**IV. TRANSPORTER(S)**

01 NAME N/A		02 D + B NUMBER		01 NAME N/A		02 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME N/A		02 D + B NUMBER		01 NAME N/A		02 D + B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

**V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.  
PA DER. Preliminary assessment. September 21, 1987.



**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES****I. IDENTIFICATION**01 STATE  
PA02 SITE NUMBER  
1873**II. PAST RESPONSE ACTIVITIES**ORIGINAL  
(Red)01 ☐ A. WATER SUPPLY CLOSED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ D. SPILLED MATERIAL REMOVED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ E. CONTAMINATED SOIL REMOVED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ F. WASTE REPACKAGED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE  
04 DESCRIPTION02 DATE October 198603 AGENCY EPA EmergencyDrums of ignitable solids, liquids, and a waste cyanide mixture were removed by EPA  
Emergency Response personnel

Response

01 ☐ H. ON-SITE BURIAL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ L. ENCAPSULATION  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ M. EMERGENCY WASTE TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ N. CUTOFF WALLS  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ P. CUTOFF TRENCHES/SUMP  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

N/A

**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873**II. PAST RESPONSE ACTIVITIES (Continued)**

ORIGINAL

01 ☐ R. BARRIER WALLS CONSTRUCTED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ S. CAPPING/COVERING  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ T. BULK TANKAGE REPAIRED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ U. GROUT CURTAIN CONSTRUCTED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ V. BOTTOM SEALED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ W. GAS CONTROL  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ X. FIRE CONTROL  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ Y. LEACHATE TREATMENT  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ Z. AREA EVACUATED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 1. ACCESS TO SITE RESTRICTED  
04 DESCRIPTION

N/a

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 2. POPULATION RELOCATED  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ 3. OTHER REMEDIAL ACTIVITIES  
04 DESCRIPTION

N/A

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

**III. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)NUS FIT 3. Site inspection. May 10, 1988.  
PA DER. Preliminary assessment. September 21, 1987.

**EPA****POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 11 - ENFORCEMENT INFORMATION****I. IDENTIFICATION****01 STATE**  
PA**02 SITE NUMBER**  
1873**ORIGINAL**  
**(Red)****II. ENFORCEMENT INFORMATION****01 PAST REGULATORY/ENFORCEMENT ACTION** ☒ YES ☐ NO**02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION**

Thirty-one drums of insulating foam production wastes were discovered in 1984 by PA DER. These drums were removed by EPA Emergency Response personnel in October 1986.

**III. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Site inspection. May 10, 1988.

PA DER. Preliminary assessment. September 21, 1987.



ORIGINAL  
(Red)

## SECTION 6

## 6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. United States Geological Survey. Erie South, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1957, photorevised 1969 and 1975.
2. NUS Corporation, FIT 3. Site inspection; site visit. TDD No. F3-8804-24, May 11, 1988.
3. Corritore, Robert, Site Owner, with Donna Davies, NUS FIT 3. Telecon. August 4, 1988.
4. Pennsylvania Department of Environmental Resources. Preliminary assessment report. September 21, 1987.
5. Gill, Max, Millcreek Township Water Authority. Water Supply Questionnaire and Distribution Map. April 1987.
6. Secretary of City of Erie Bureau of Water, with Mark Chamberlain, NUS FIT 3. Telecon. April 21, 1987.
7. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Groundwater Inventory System. 1984.
8. Tamikel, J.C., and V.C. Shepps, Pennsylvania Geological Survey. Geography and Geology of Erie County, Pennsylvania. Information Circular 56, 1967.
9. White, G.W., et al., Pennsylvania Geological Survey. Pleistocene Stratigraphy of Northwestern Pennsylvania. General Geology Report 55, 1969.
10. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Atlas of Preliminary Geologic Quadrangle Maps of Pennsylvania. Map 61, 1980.
11. Geyer, A.R., and J.P. Wilshusen, Pennsylvania Geological Survey. Engineering Characteristics of the Rocks of Pennsylvania. Environmental Geology Report 1, 1982.
12. Schooler, E.E., Pennsylvania Geological Survey. Pleistocene Beach Ridges of Northwestern Pennsylvania. General Geology Report 64, 1974.

ORIGINAL

13. United States Department of Agriculture, Soil Conservation Service. Soil Survey of Erie County, Pennsylvania. 1960.
14. National Oceanic and Atmospheric Administration. Climatology of the United States. Local Climatological Data. Erie, Pennsylvania. 1976.
15. Kulp, Charles, United States Department of the Interior, Fish and Wildlife Service, to Garth Glenn, NUS FIT 3. Correspondence. July 29, 1987.



ORIGINAL  
(Rev.)

## SECTION 7

## 7.0 LABORATORY DATA

### 7.1 Sample Data Summary

The attached data summary contains only compounds which were identified as detected in at least one sample. The complete list of compounds analyzed for, their results, and the associated detection limits are located as an appendix. Results for tentatively identified compounds appear following the organic data section of this report.

The following codes are used in the data summary to indicate the confidence in the laboratory results:

#### CODES RELATING TO IDENTIFICATION

(confidence concerning presence or absence of compounds):

- U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.
- (NO CODE) = Confirmed identification.
- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

#### CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

- J = Analyte present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

#### OTHER CODES

- Q = No analytical result.

[illegible]

1) TOD NUMBER	6) LABORATORY NAME	11) DILUTION FACTOR
2) EPA NUMBER	7) TRAFFIC REPORT #	12) PH
3) SITE NAME	8) SAMPLE IDENTIFIER	13) FIELD MEASUREMENTS
4) STATE & COUNTY CODE	9) PHASE	14) PERCENT SOLID
5) ORGANIC OR INORGANIC	10) CONCENTRATION	15) UNITS

Field Blank { CP745 }



## SAMPLE DATA SUMMARY

[illegible]



## SAMPLE DATA SUMMARY

[illegible]

ORIGINAL  
Invent



## SAMPLE DATA SUMMARY

[illegible]

NET.	
1) TDD NUMBER	6) LABORATORY NAME
2) EPA NUMBER	7) TRAFFIC REPORT #
3) SITE NAME	8) SAMPLE IDENTIFIER
4) STATE & COUNTY CODE	9) PHASE
5) ORGANIC OR INORGANIC	10) CONCENTRATION
	11) DILUTION FACTOR
	12) PH
	13) FIELD MEASUREMENTS
	14) PERCENT SOLID
	15) UNITS

Duplicates: { Aqueous MCP 89 and MCP 97 }  
                  { Solid MCP 89 and MCP 903 }

F-216 Blank - MCP 902.

ORIGINAL  
(Red)



[illegible][illegible]

KEY:

- 1) TDD NUMBER  
2) EPA NUMBER  
3) SITE NAME  
4) STATE & COUNTY CODE  
5) ORGANIC OR INORGANIC  
6) LABORATORY NAME  
7) TRAFFIC REPORT  
8) SAMPLE IDENTIFIER  
9) PHASE  
10) CONCENTRATION  
11) TTD DILUTION FACTOR  
12) PH  
13) FIELD MEASUREMENTS  
14) PERCENT SOLID  
15) UNITS

ORIGINAL  
(Red)

1) F3-8804-24

ORIGINAL  
(Red)

6) LABORATORY NAME: 777 DILUTION FACTOR

6) LABORATORY NAME 1-777 DILUTION FACTOR

7) TRAFFIC REPORT # 127 PH  
8) SAMPLE IDENTIFIER \_\_\_\_\_

9) PHASE

0) CONCENTRATION

\_\_\_\_\_





ORIGINAL  
(Red)

- |                         |                      |                        |
|-------------------------|----------------------|------------------------|
| 1) TDD NUMBER           | 6) LABORATORY NAME   | 11) DILUTION FACTOR    |
| 2) EPA NUMBER           | 7) TRAFFIC REPORT    | 12) PH                 |
| 3) SITE NAME            | 8) SAMPLE IDENTIFIER | 13) FIELD MEASUREMENTS |
| 4) STATE & COUNTY CODE  | 9) PHASE             | 14) PERCENT SOLID      |
| 5) ORGANIC OR INORGANIC | 10) CONCENTRATION    | 15) UNITS              |



ORIGINAL  
(Red)

## 7.2 Quality Assurance Review

### 7.2.1 Organic Data: Lab Case 9562

#### 7.2.1.1 Introduction

Ten solid samples and 7 aqueous samples were analyzed through the EPA Contract Laboratory Program (CLP) for full organics. The samples were divided by matrix and sent to two separate laboratories. The aqueous samples included four home wells, a field blank, and a field duplicate pair. The solid sample included a field duplicate pair and a field blank for volatile analysis only.

The laboratory data have been fully reviewed to determine the usability of results according to National Guidelines (areas examined in detail are listed in the Support Documentation appendix). Although there were several problems noted during the review of the laboratory data, most did not result in major impacts on the overall data quality/usability. Overall, detection capability was acceptable for most compounds, as demonstrated by meeting criteria for holding times, tuning, and instrument performance. Blank contamination affected mostly low-level sample results for several compounds, and quantitative accuracy and precision were acceptable for most results.

Aside from blank contamination in field and laboratory blanks, other areas of concern with the analytical data are matrix spike recoveries for the aqueous volatile samples and biased low detection limits for dieldrin in the aqueous pesticide samples. Other areas of concern with the analytical data are relatively minor and, therefore, had no major effect. The following section explains these areas of concern and their associated impact on the sample results.

#### 7.2.1.2 Qualifiers

- There is evidence to doubt the presence of methylene chloride, acetone, and toluene in all samples, as well as carbon disulfide, 1,2-dichloroethene, chloroform, 2-butanone, xylene, di-n-butyl phthalate, and di-n-octyl phthalate in all aqueous samples, based upon the fact that the concentrations reported were not substantially above the levels detected in laboratory or field blanks. These results have been flagged (B) on the data summary.

ORIGINAL  
(Red)

- The presence of bis(2-ethylhexyl) phthalate in samples CP740 and CP729 and di-n-butyl phthalate in sample CP747 may be considered questionable. These compounds are common laboratory contaminants, suggesting that the presence of this compound should be considered suspected unreliable and thus flagged (R) on the data summary. These results are all less than 10 nanograms, the instrument level in a concentration range where a high percentage of blank analyses reveal bis(2-ethylhexyl) phthalate and di-n-butyl phthalate. It was also noted the bis(2-ethylhexyl) phthalate was not detected in the field duplicate of samples CP740 and CP729.
- The positive results for 1,1-dichloroethene in the aqueous samples may be considered estimated due to the high matrix spike recoveries noted in aqueous sample CP738.
- Detection limits for dieldrin in the aqueous samples may be considered biased low. This is attributed to the low matrix spike recoveries noted in sample CP738.
- The positive results for DDT, DDD, and DDE in solid sample CP747 are considered confident. The presence of all three members of the DDT family is an occurrence that would be unlikely to be duplicated by three unrelated compounds having the same retention times as the DDT analogs.
- Detection limits for 2-butanone in all samples except CP747 are considered unreliable and may be substantially higher than reported. This is a result of low response factors (below 0.05) observed for this compound in the standards associated with these samples. Such low response factors indicate poor sensitivity to a particular compound, thereby affecting detection limits (see the Support Documentation appendix, initial and continuing calibration). Therefore, the positive results for 2-butanone in CP745 and CP729 have been flagged (J) and considered estimated.
- Benzo(b)fluoranthene and benzo(k)fluoranthene are indistinguishable isomers; therefore, the reported results in the samples may represent the presence of either or both isomers.

ORIGINAL  
(Red)

- In general, few tentatively identified compounds (TICs) were detected in all samples, except those associated with laboratory or field blank contamination. TIC results are summarized in a tabulation immediately following this report.
- Results that are below the limit of accurate quantitation have been flagged (J), estimated, where no other flag exists.

#### 7.2.1.3 Support Data

The Support Documentation appendix to this report documents the above findings associated with blank contamination, calibration response factors, pesticide identification, and matrix spike results. The text of this report has been formatted to address only those issues affecting the application of the data to subject investigation.

Report prepared by

(b) (4)

Report reviewed by

(b) (4)



SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

[illegible]

DEFINITIONS OF QUALIFIER CODES:

- SUS = SUSPECTED FALSE POSITIVE RESULT: Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.
- UNK = UNKNOWN COMPOUND: Library search result unreasonable or of very low matching quality.
- TOT = TOTAL CONCENTRATION REPORTED: Represents the sum of several compounds detected all belonging to the same chemical class.
- ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

# SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION		QUALIFIER CODE	COMPOUND NAME
		VALUE	UNITS		
CP 728	VOA				N.D.
	BNA	1100	ug/kg	UNK	unknown alcohol
		4200	ug/kg	TOT	Saturated Hydrocarbon TOT (4)
		2900	ug/kg	TOT/UNK	unknown TOT (4)
CP 729	VOA				N.D.
	BNA				
		740	ug/kg	UNK	unknown such as C <sub>10</sub> H <sub>16</sub>
		300	ug/kg	UNK	unknown such as C <sub>15</sub> H <sub>24</sub>
		19000	ug/kg	TOT	Saturated Hydrocarbon TOT (9)
		3200	ug/kg	TOT/UNK	unknown TOT (6)
CP 730	VOA				N.D.
	BNA	5000	ug/kg	TOT/UNK	unsaturated Hydrocarbon TOT (3)
		1240	ug/kg	UNK	unknown, possible C <sub>17</sub> H <sub>32</sub> O <sub>2</sub>
		3800	ug/kg	TOT	Saturated Hydrocarbon TOT (2)
		3100	ug/kg	TOT/UNK	unknown TOT (4)
CP 731	VOA				N.D.
	BNA	750	ug/kg	UNK	unknown Alcohol
		540	ug/kg		Saturated hydrocarbon
		870	ug/kg	UNK	unsaturated hydrocarbon
		17,000	ug/kg	TOT/UNK	unknown TOT (16)
CP 732	VOA				N.D.
	BNA	2600	ug/kg		unknown Alcohol C <sub>32</sub> H <sub>66</sub> O
		12,300	ug/kg	TOT	Saturated hydrocarbon
		6500	ug/kg	TOT	unsaturated hydrocarbon TOT (2)
		3300	ug/kg	TOT/UNK	unknown TOT (5)

## DEFINITIONS OF QUALIFIER CODES:

- SUS = SUSPECTED FALSE POSITIVE RESULT: Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.
- UNK = UNKNOWN COMPOUND: Library search result unreasonable or of very low matching quality.
- TOT = TOTAL CONCENTRATION REPORTED: Represents the sum of several compounds detected all belonging to the same chemical class.
- ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.



# SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

ORIGINAL  
(Red)

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION		QUALIFIER CODE	COMPOUND NAME
		VALUE	UNITS		
Pg 2 - Sol. d of 2.					
CP 733	VOA				N.D.
	BNA	160	µg/kg		2,3-dimethyl-Heptane
		510	µg/kg		Saturated Hydrocarbon coeluting w/ a PAH
		520	µg/kg	ISO	unk possible Benzo [a] Fluorene Isomer
		320	µg/kg	ISO	Unknown possible Benzo [a] Fluorene Isomer
		600	µg/kg	ISO	Unknown possible Benzo [a] acenaphthylene Isomer
		2000	µg/kg	TOT	Saturated Hydrocarbon TOT (6)
		400	µg/kg	UNK	unknown aromatic
	▼	700	µg/kg	TOT UNK	unknown TOT (2)
CP 734	VOA				N.D.
	BNA	300	µg/kg		1-methyl-Naphthalene
		400	µg/kg		9H Carbazole (C <sub>12</sub> H <sub>9</sub> N <sub>2</sub> ) # 2788230
		390	µg/kg	ISO	Benzo [a] fluorene
		4200	µg/kg	UNK TOT	unsaturated hydrocarbon TOT (2)
		5200	µg/kg	TOT	Saturated hydrocarbon TOT (10)
CP 746	VOA				N.D.
	BNA	4000	µg/kg	UNK TOT	unsaturated Hydrocarbon TOT (2)
		2800	µg/kg	TOT	Saturated Hydrocarbon TOT (2)
		2000	µg/kg	UNK TOT	unknown TOT (2)
CP 747	VOA				N.D.
	BNA	480	µg/kg	ISO	Hexanedioic Ac. d Isomer
		5000	µg/kg	UNK TOT	unsaturated Hydrocarbon TOT (4)
		4000	µg/kg	TOT	Saturated hydrocarbon TOT (2)
		2600	µg/kg	UNK TOT	unknown TOT (5)

DEFINITIONS OF QUALIFIER CODES:

## DEFINITIONS OF QUALIFIER CODES:

- SUS = **SUSPECTED FALSE POSITIVE RESULT:** Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.
- UNK = **UNKNOWN COMPOUND:** Library search result unreasonable or of very low matching quality.
- TOT = **TOTAL CONCENTRATION REPORTED:** Represents the sum of several compounds detected all belonging to the same chemical class.
- ISO = **OR ISOMER:** Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

PAH - Polyaromatic Hydrocarbon



ORIGINAL  
(Red)

## 7.2.2 Inorganic Data: Lab Case 9562

### 7.2.2.1 Summary

Nine solid samples and seven aqueous samples were analyzed through the EPA CLP for metals and cyanide. The aqueous samples included four home wells, a field blank, and a field duplicate pair. The solid samples included a field duplicate pair.

The laboratory data have been fully reviewed to determine the usability of results according to the National Guidelines (areas examined in detail are included in the Support Documentation appendix). Although there were several problems noted during the review of the laboratory data, most did not result in major impacts on the overall data quality/usability. Overall, detection capability was acceptable for most elements, as demonstrated by meeting criteria for holding times, matrix spikes, post-digestion spikes, and instrument detection limits. Blank contamination affected mostly low-level results for several elements. Minor problems were noted with quantitative precision and accuracy, resulting in the flagging of several results as estimated (J) on the data summary and the qualification of detection limits as biased low.

In general, the principal areas of concern were identified as blank contamination and variable matrix spike recoveries for several elements.

### 7.2.2.2 Qualifiers

- There is evidence to doubt the presence of several inorganic elements, based upon the fact that the concentrations reported were not substantially above the levels detected in laboratory or field blanks. These results have been flagged (B) on the data summary, as listed on the following page.

ORIGINAL  
(Red)

Elements	Sample Numbers
antimony	MCP894
arsenic	MCP892
cadmium	MCP899, MCP888, and MCP889
copper	All positive results except MCP896, MCP897, and MCP905
iron	MCP896 and MCP897
lead	All positive aqueous samples and solid samples MCP887, MCP889, MCP891, MCP893, and MCP895
manganese	MCP896 and MCP897
zinc	All positive aqueous samples

- Detection limits for thallium may be considered biased low, due to the low percent recovery noted in aqueous matrix spike sample MCP894.
- The positive results for arsenic in solid samples have been flagged (J), estimated. This may be attributed to the low matrix spike recovery of solid sample MCP888.
- The positive result for potassium in solid sample MCP905 has been corrected by the reviewer. The laboratory miscalculated this result as 27,000 mg/kg. The reviewer corrected the value to 7,000 mg/kg.
- The positive result for cadmium in sample MCP903 was added to the data summary as 7.2 mg/kg. The laboratory misreported the value as undetected.
- The positive result for manganese in sample MCP888 was added to the data summary as 246 mg/kg. The laboratory miscalculated this result as 16 mg/kg.

ORIGINAL  
(Red)

- Duplicate imprecision was noted for mercury in solid samples MCP889 and MCP903. Therefore, the positive results for mercury in the solid samples have been flagged (J) and considered estimated.
- The positive results or detection limits for the following elements have been affected by failure to obtain good recoveries for the two-times contract required detection limit (CRDL) standards, which exhibited poor calibration ranges.

Element	Code	Effect	Samples Affected*
silver	L	biased low detection limits	all samples
beryllium	J	considered estimated	MCP887, MCP890, MCP891, and MCP905
cadmium	(J)	considered biased high	MCP887, MCP890, MCP891, MCP893, MCP895, MCP903, and MCP905
chromium	(J)	considered estimated	all positive results
copper	J	considered estimated	all positive results except MCP896 and MCP897
nickel	J	considered estimated	all positive results
zinc	(J)	considered biased high	all positive aqueous results

\* Note that the code for blank contamination (B) supercedes the code for samples affected (J).



#### 7.2.2.3 Support Data

The Support Documentation appendix to this report documents the above findings regarding blank analyses, matrix spikes, two-times CRDL standards, and detection limits. The text of this report has been formatted to address only those issues affecting the application of the data to the subject investigation.

Report prepared by

(b) (4)



ORIGINAL  
(Red)

## SECTION 8

## 8.0 TOXICOLOGICAL EVALUATION

### 8.1 Summary

The primary concern at the Tri-State Rotunda Drive site is the former drum disposal area. Auger samples from this area revealed notable levels of cadmium and mercury. Surface soil samples from the site also showed elevated levels of cadmium. The highest levels of the majority of metals found on site, including lead and cadmium, were measured in a sample from the floor of a shed. Contact with the reported metal levels is not expected to result in any adverse effects. The presence of notable metal levels in the auger samples may suggest the potential for groundwater infiltration. The condition of groundwater beneath the site is unknown; samples from three wells located on and near the site did not indicate contamination by toxic metals.

Sediment samples from the tributary to Walnut Creek revealed notable levels of cadmium and mercury upstream of the site as well as cadmium and the common soil contaminants polycyclic aromatic hydrocarbons (PAHs) downstream of the site. Contact with these contaminants is not expected to pose any human health concerns. Although no mercury was detected in the tributary aqueous sample, it must be noted that the detection limit for mercury is approximately 20 times higher than the Ambient Water Quality Criterion (AWQC) for this highly bioaccumulative metal. The uses for the tributary are unknown.

### 8.2 Support Data

#### 8.2.1 Inorganics

Surface soil and auger samples from the site revealed elevated levels of the heavy metal cadmium (up to 24 mg/kg and 9.4 mg/kg, respectively). In addition, an isolated surface soil sample contained a notable concentration of the toxic metal lead (734 mg/kg), while mercury was detected at an above-normal level in one auger sample (6.5 mg/kg). Upper-range soil levels for these metals are as follows: cadmium, 0.7 mg/kg; lead, 300 mg/kg; and mercury, 3.4 mg/kg.<sup>1,2</sup> It is interesting to note that the highest concentration of the majority of the metals identified on site, including cadmium and lead, was measured in a sample obtained from the floor of the storage shed. Access to this currently active site is unrestricted. Direct contact with the reported contaminants is not expected to result in any adverse effects.



Of primary interest with respect to the contaminants at this site is the potential for groundwater migration. The presence of notable levels of cadmium and mercury, both of which may be mobile in soils, in an auger sample from the former drum storage area may suggest the potential for infiltration to groundwater beneath the site. Mercury in soils, however, can be methylated by microorganisms to form toxic methyl mercury, which tends to adsorb to organic elements in soils, rendering it relatively immobile.<sup>3</sup> Due to a lack of monitoring wells on site, the condition of groundwater beneath the site cannot be determined. Shallow groundwater is expected to flow northwardly toward and into Walnut Creek (see section 3.3.3).

Samples from two potable wells near the site and a currently nonpotable well on site did not reveal any contaminants of toxicological concern. A sample from the South Side Trailer Service well on site showed only an aluminum level (105 ug/l) in excess of the drinking water guidance level of 50 ug/l recommended by the American Water Works Association for the effective removal of particulates.<sup>4</sup> A sample from the potable Transport Equipment Supply Company well showed iron (405 ug/l) and manganese (150 ug/l) above their aesthetic Secondary Maximum Contaminant Levels (SMCLs) of 300 ug/l and 50 ug/l, respectively, as well as sodium (67,200 ug/l) in excess of the EPA drinking water guidance level of 20,000 ug/l.<sup>5</sup> Consumption of water from this well may result in nothing more remarkable than an excessive sodium intake for persons on a low-sodium diet.

The contaminants reported on site may also migrate from the site with surface water runoff. Aqueous and sediment samples from the tributary to Walnut Creek upstream of the site showed notable levels of cadmium (6.6 mg/kg) and mercury (6.0 mg/kg). The downstream samples from this tributary showed a similar level of cadmium (8.9 mg/kg), no detectable mercury, and a notable level of aluminum (320 ug/l; the AWQC is 150 ug/l).<sup>6</sup> It is important to note that the detection limit of 0.2 ug/l for mercury is well above the AWQC of 0.012 ug/l for this metal.<sup>7</sup> Since mercury was detected at a notable level in the tributary sediment, it is possible that mercury is present in the aqueous fraction at a level below the detection limit but above the AWQC. Mercury is a highly bioaccumulative contaminant that can adversely affect the health of fish, as well as their uses, at about the same concentration. Walnut Creek is used for recreational purposes; however, the uses of the site-adjacent tributary, if any, are not known. Dilution and precipitation would be expected to reduce aqueous contaminant levels prior to reaching Walnut Creek.

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### 8.2.2 Organics

Surface soil and auger samples from the site did not reveal any organic contaminants at notable concentrations. Estimated trace levels of 1,2-dichloroethene (2 ug/kg) and 1,4-dichlorobenzene (81 ug/kg) were identified in isolated soil samples; the reported levels of these compounds are not expected to migrate to a notable degree or to pose any concerns.

Sediment samples from the tributary to Walnut Creek revealed up to 25,004 ug/kg of the common soil contaminants PAHs. These primarily nonvolatile, immobile, and persistent compounds are formed during the incomplete combustion of organic matter and are commonly found in tar, soot, petroleum products, automotive exhaust, fried foods, and smoked meats. PAH concentrations in soils from relatively rural areas of the eastern United States typically range up to 13,000 ug/kg; however, much higher levels are seen in soils surrounding railroads and areas of heavy highway traffic, as well as in road surface runoffs.<sup>8,9</sup> Note that Route 19 crosses over the tributary to Walnut Creek upstream of the site and that the site is currently used as a tractor trailer repair and maintenance facility (see figure 2.2 and section 2.2). Contact with reported levels is not expected to result in any adverse effects, and no environmental impacts are anticipated.

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